

Growing of Alfalfa— "The Queen of Crops"

(Continued from Last Week.)

ALFALFA seed should be inoculated by means of artificial culture either obtained from the Government or from some firm who propagate it, and it costs about \$2 per acre for the inoculating fluid. Directions always go with the preparation and should be carefully followed. Another means of inoculation is obtained from dirt from a well-established alfalfa field. About 300 to 500 pounds per acre of this should be applied by hand late in the afternoon or on a cloudy day, and the soil, after it has been taken from the alfalfa field, should be kept a little moist and not be allowed to dry by the direct rays of the sun. The bacteria of inoculation for alfalfa are very sensitive, and the sunlight kills them. Another means of inoculation for alfalfa is obtained from dirt under the roots of sweet clover, and this is usually along the public roads. Sweet clover is so intimately connected with alfalfa that the nodules on its roots furnish inoculation for alfalfa as no other plant does. The inoculation should be applied immediately before the seeding and lightly harrowed in. If the land has been seeded with a machine, it will need no other treatment, but if it has been applied by hand or by wheelbarrow seeder, then the surface of the field should be very lightly harrowed and never rolled after seeding.

Treatment of Meadows.

Many fields of alfalfa have been destroyed by weeds and grass taking them after a few years of good production. Bluegrass is one of the worst enemies of alfalfa, and this and all other weeds can be easily eradicated by means of a good spring-tooth harrow run crossways over the field. Some will doubtless say that the harrow will tear alfalfa all to pieces, but I have never seen a single crown of alfalfa destroyed by a spring-tooth harrow. You can literally tear the field all to pieces by harrowing both ways, yet the alfalfa is not disturbed, and it grows all the better for the working and the weeds and grass are killed. A disc set slightly slanting is sometimes used to cultivate an alfalfa field. If a farmer can not get a spring-tooth harrow, then I would recommend a disc harrow run one way and a fine-tooth harrow run across the field.

I would recommend by all means to keep all animals off the alfalfa meadow. The less tramping it gets, the better it grows. However, many men desire to pasture alfalfa and some have done so very successfully both with sheep and hogs, and in the West and South alfalfa meadows are grazed during the winter with horses and cattle.

Improving the Soil.

As doubtless many of you know that after an alfalfa field which has stood for several years is plowed and planted to other crops, the succeeding crops on this are far better than on other land where alfalfa has not grown. The reason for this is, because the lime and phosphate have been put into the soil, in addition to nitrogen, which alfalfa breathes in from the air and deposits through its roots by means of the little nodules of bacteria growing on the roots of alfalfa and other legumes, and it is a wise provision of Nature that these plants breathe in nitrogen and deposit it into the soil through these little germinating cells. The more nodules the roots of any legumes have, the richer the land becomes.

You may ask just here, how alfalfa will fit into the crop rotation of our agriculture? Clover stands for one or two years, then the land is turned under and fits in splendidly in our rotation. Alfalfa will grow for a great many more years, but it can be turned under in two years with even more benefit than red clover imparts, but if a man has a well established alfalfa field, he is not apt to sacrifice it in two years; hence the rotation can be made longer. I have heard some men say that they did not want alfalfa on the farm, because it was impossible to kill it, and ordinarily speaking I will say that you must have a sharp plow to cut the roots of alfalfa, but when they are cut off the plant dies and all its big roots, besides adding nitrogen to the soil, add humus also and make the land porous for several feet deep. No other plant does this. When planting alfalfa one must remember that we are entering into a plan of permanent improvement of our soils.

Alfalfa Hay.

It is needless for me to tell you of the value of this great clover for hay. It is as rich as wheat bran and it furnishes the best hay for balancing

rations for all live stock. If any one can imagine a field growing six to eight tons of wheat bran per acre, worth \$25 per ton, then you have a comparative value of alfalfa hay. It will in time enter into all of our feeding rations, and is doing so now with a great many of our feeders.

I know one dairy farmer who raised eight tons per acre of alfalfa, and previous to sowing it he fed ensilage and cottonseed meal and clover hay, and then one day he decided that it was useless to buy concentrates at all and he fed ensilage and alfalfa hay and obtained exactly the same result in milk and butter as he did when feeding the other rations. Thus you see he avoided the necessity of purchasing any concentrated form of protein. Alfalfa hay is the best hay for all livestock. It is good for work horses and driving horses, although they should not be given all they want to eat, but it should be supplemented with some timothy. For milk cows there is no better hay in the world, and also for beef cattle. For hogs it furnishes a good pasture, providing you wish to pasture your meadows. Alfalfa hay can be fed, chopped short, with grain in the winter, and it makes an ideal ration. For poultry alfalfa furnishes an excellent feed.

Yield of Alfalfa.

I have reports from alfalfa growers from over the State of Kentucky, hundreds of them, and it is intensely interesting to note the variation in the yield of this great crop. It may run from three cuttings of one ton per ton to four cuttings of eight tons per season. These variations indicate to me the difference in preparing

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That always means, with our matchless output, more for the money than any other maker can give.

As rubber came down our prices came down. As our output multiplied, reducing factory cost, our prices came down with it. In two years our reductions—including the present—have totaled 45 per cent.

Last year we increased our output 26.6 per cent. A few days ago the embargo on rubber was modified so that supplies seem assured. The market price for rubber seems for a time established. Fabric costs less than last year. So, under our minimum profit policy, we announce this new reduction.

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the land for alfalfa. In Jefferson County I have seen eight tons per acre taken in four cuttings and it is done without affecting the stand.

Take, for instance, a field that is producing six tons of alfalfa per year, which is worth \$20, this makes \$120 taken from the land without cultivation and seeding, and thus avoiding these expenses, and yet producing more net income than most other crops. A good crop of wheat is 30 bushels to the acre, at \$1 per bushel, the net income is \$30. A good crop of corn is 75 bushels per acre at 75c per bushel, net income \$56.25 per acre. A good crop of clover is two tons per acre, say \$17 per ton, \$34 income. A good crop of timothy is about the same amount. So you see alfalfa is one of the best cash crops that a farmer could raise. But it should never be turned into cash, but fed on the place, by all means. A farmer is committing land suicide if he ever sells clover or alfalfa. He should feed it and market it to his cattle and the residue will go back to the land in the form of manure.

What place has alfalfa in our permanent agriculture? I claim it should have the very first place. The elements of lime and phosphate must be supplied in order to grow alfalfa successfully, but in doing so we are putting into the soil elements that all crops require. Therefore, in growing a field of alfalfa we are fitting the land for all or any following crop, because the alfalfa adds the nitrogen.

It means permanent improvement of our soil, putting back the natural elements that man has ruthlessly and selfishly robbed our lands of. Alfalfa is not a lazy man's crop. It

takes hard work, intelligent application and its costs some money, too, but it means an investment safer than a National bank, and it will pay big dividends for years to come, because the lime and phosphates that you put there to grow alfalfa and the nitrogen that alfalfa deposits in the land will make your land rich, besides having had the harvesting of tons and tons of fine hay for feeding. Alfalfa loves deep, rich loam and a plenty of manure. It reminds me of the little verse written by an Ohio Experiment Station worker:

Lime and lime without manure
Makes the farm and farmer poor.
But lime, manure and vigorous clover
Make the old farm rich all over.
In growing alfalfa we are inculcating more intelligence in ourselves, making better farmers, better men and boys.

Denver Eats Butter.

One creamery in Denver uses 10,000 gallons of cream daily. More than half of this amount is shipped in from Kansas, Nebraska and other adjoining states. Sixty-five cents a gallon is paid. So this one concern alone pays more than \$1,000,000 annually for cream from outside of Colorado. This creamery manufactures 25,000 pounds of butter daily, which at the retail price of 35 cents amounts to \$8750 a day or more than \$2,500,000 a year. This means that Denver folks eat some butter. Of course the entire amount is not consumed in Denver, but then it must be remembered that these figures apply to but one creamery and there are a dozen others right in the town, to say nothing of the bull butter and process factories.